

# Douglas Coates

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arXiv [arxiv.org/a/coates\\_d\\_1](https://arxiv.org/a/coates_d_1)

## RESEARCH POSITIONS

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| <b>Postdoctoral Researcher</b> , FAPESP funded position under the supervision of Ali Tahzibi, Universidade de São Paulo, São Carlos, Brazil            | Jul. 2023 - Present   |
| <b>Postdoctoral Research Associate</b> , EPSRC funded position under the supervision of Mark Holland, The University of Exeter, Exeter, United Kingdom | Apr. 2022 - Apr. 2023 |
| <b>Postdoctoral Researcher</b> , under the supervision of Sylvain Crovisier, Université Paris Saclay (CNRS), Paris, France                             | Sep. 2021 - Mar. 2022 |

## EDUCATION

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| <b>PhD. Mathematics</b> , under the supervision of Mark Holland and Dalia Terhesiu, | Oct. 2016 - Jan. 2021 |
| <b>MSci Mathematics</b> , University of Bristol                                     | Sep. 2012 - Sep. 2016 |

## PUBLICATIONS AND PREPRINTS

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- [1] Douglas Coates and Stefano Luzzatto. “Persistent Non-statistical Dynamics in One-Dimensional Maps”. In: *Communications in Mathematical Physics* 405.4 (Apr. 2024), p. 102.
- [2] Douglas Coates, Stefano Luzzatto, and Mubarak Muhammad. “Doubly Intermittent Full Branch Maps with Critical Points and Singularities”. In: *Communications in Mathematical Physics* 402.2 (2023), pp. 1845–1878. DOI: [10.1007/s00220-023-04766-x](https://doi.org/10.1007/s00220-023-04766-x). URL: <https://doi.org/10.1007/s00220-023-04766-x>.
- [3] Douglas Coates. “Semi-Stable Laws for Intermittent Maps”. 2021. URL: <https://ore.exeter.ac.uk/repository/handle/10871/124410>.
- [4] Douglas Coates, Mark Holland, and Dalia Terhesiu. “Limit Theorems for Wobbly Interval Intermittent Maps”. In: *Studia Mathematica* 261.3 (2021), pp. 269–305. ISSN: 0039-3223. DOI: [10.4064/sm200427-21-11](https://doi-org.uoelibrary.idm.oclc.org/10.4064/sm200427-21-11). URL: <https://doi-org.uoelibrary.idm.oclc.org/10.4064/sm200427-21-11>.

## VISITING POSITIONS

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| Visitor of <i>Katrin Gelfert</i> , <b>Universidade Federal do Rio de Janeiro</b> , Rio de Janeiro, Brazil                 | Jun. 2023        |
| Visitor of <i>Lorenzo Diaz</i> , <b>Pontifícia Universidade Católica do Rio de Janeiro</b> , Rio de Janeiro, Brazil       | May 2023         |
| Visitor of <i>Ali Tahzibi</i> , <b>University of São Paulo, ICMC</b> , São Carlos, Brazil                                 | Nov. 2022        |
| Visitor of <i>Marcelo Viana</i> , <b>Instituto de Matemática Pura e Aplicada</b> , Rio de Janeiro, Brazil                 | Oct. - Nov. 2022 |
| Visitor of <i>Stefano Luzzatto</i> , <b>The Abdus Salam International Centre for Theoretical Physics</b> , Trieste, Italy | May - Dec. 2022  |
| Visitor of <i>Stefano Luzzatto</i> , <b>The Abdus Salam International Centre for Theoretical Physics</b> , Trieste, Italy | Feb. - Aug. 2021 |

## TEACHING

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### Teaching positions

<b>Teaching Assistant</b> , Universidade de São Paulo (ICMC), São Carlos, Brazil <i>Responsibilities</i> : lecturing <i>Courses</i> : ergodic theory (graduate course, partial), Stable Laws in Dynamical Systems (specialised mini-course)	Jul. 2023 - present
<b>Academic Program Manager and Senior Tutor</b> , International Mathematics Master (ICTP programme in Pakistan), <i>Responsibilities</i> : problems classes, lecturing, course preparation, administration, exam writing, supervision of master's thesis <i>Courses</i> : commutative algebra, real analysis and measure theory, differential geometry, probability, dynamical systems, functional analysis, differential equations	Jul. 2020 - Jan. 2022
<b>Teaching Assistant</b> at ICTP, Trieste, Italy <i>Responsibilities</i> : problems classes, homework marking <i>Courses</i> : dynamical systems and ergodic theory (master's level)	Feb. - Aug. 2021
<b>Teaching Assistant</b> at the University of Exeter, Exeter, UK <i>Responsibilities</i> : problems classes, exam marking, homework marking <i>Courses</i> : mathematical structures (1st year), mathematical methods (1st year), signals series and transforms (2nd/3rd year), stochastic processes (2nd/3rd year), metric spaces and topology (3rd/4th year)	2016 - 2020

### Short courses

Limit theorems in dynamical systems using transfer operator methods - 6 hour mini-course joint between PUC-UFRJ	Jun. 2023
Markov-chains and the Perron-Frobenius theorem - 6 hour online preparatory mini-course for the "VII Escola Brasileira de Sistemas Dinâmicos"	Oct. 2023

## SELECTED RESEARCH TALKS

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Conference on Dynamics and Finance: from KAM Tori to ETFs - ICTP	Oct. 2023
IMPA	July 2023
EDAI meeting - PUC	May 2023
University of Exeter	Apr. 2023
Universidade de São Paulo	Nov. 2022
Jangada Dinamica Conference - Universidade Federal do Ceará	Nov. 2022
Université Paris Saclay	Sep. 2021
University of Bristol	Oct. 2019
University of Exeter	Jan. 2018

## EVENTS ORGANISED/CO-ORGANISED

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<a href="#">Probabilistic methods for non-stationary dynamical systems</a> - <i>University of Exeter</i>	April 2023
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## LANGUAGES

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English - Fluent,      Italian - Fluent,      Spanish - Proficient,      Portuguese - Intermediate.